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~	2,669,668	Feb 54	Okulitch et al.			
	3,487,784	Jan 70	Rafferty et al.			
	3,608,088	Sep 71	Dorman et al.			
	3,626,947	Dec 71	Sparks			
	3,647,324	Mar 72	Rafferty et al.			
	3,771,527	Nov 73	Ruisi			
	3,864,055	Feb 75	Kletschka et al.			
	3,896,501	Jul 75	Bifano et al.			
	3,957,389	May 76	Rafferty et al.			
	3,970,408	Jul 76	Rafferty et al.			

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1 222 355	Jun 87	Canada			
1 240 802	Aug 88	Canada			
 1 302 829	Jun 92	Canada			
1 308 319	Oct 92	Canada			
 1 323 467	Oct 93	Canada ·			

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		Takami, Yoshiyuki, et al., "Effect of Surface Roughness on Hemolysis in a Centrifugal Blood Pump", ASAIO Journal; vol. 42 pp. M858-N862.
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		Takami, Yoshiyuki, et al., "Material of the Double Pivot Bearing System in the Gyro C1E3 Centrifugal Pump", Artificial Organs, vol. 21, No. 2, pp. 143-147, 1997.

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1	3,995,617	Dec 76	Watkins et al.			
	4,086,665	May 78	Poirier			
	4,105,016	Aug 78	Donovan, Jr.			
	4,108,161	Aug 78	Samuels et al.			
	4,116,589	Sep 78	Rishton			
	4,118,806	Oct 78	Porier et al.			
	4,129,129	Dec 78	Amrine			
	4,135,253	Jan 79	Reich et al.			
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	4,275,988	Jun 81	Kalasknikov et al.			7
	4,382,199	May 83	Isaacson			`.

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$\perp 1$	1 328 708	Apr 94	Canada			
) -\	280 225	Aug 88	EPO			
1	0157871 B1	Jul 90	EPO			
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X	4,403,983	Sep 83	Edelman et al.			
	4,451,252	May 84	Martin			
	4,507,048	Mar 85	Belenger et al.			
	4,512,726	Apr 85	Strimling			:
	4,567,882	Feb 86	Heller		DEC	EIVED
	4,589,822	May 86	Clausen et al.			
	4,606,698	Aug 86	Clausen et al.		JAN 3	1 2003
	4,625,712	Dec 86	Wampler	TEC	HNOLOGY	CENTER R3700
	4,648,865	Mar 87	Aigner			
	4,688,998	Aug 87	Olsen et al.			
	4,704,121	Nov 87	Moise		<u> </u>	

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		0396575	Mar 94	EPO			
		0397668	Mar 94	EPO			
	<u> </u>	0611580	Aug 94	EPO ·	<u> </u>		
	1	0478635	Dec 94	EPO			
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`		Anai, Hirofumi, et al., "Relationship Between Pump Speed Design and Hemolysis in an Axial Flow Blood Pump", Artificial Organs, vol. 20, No. 6, pp. 564-567, 1996.
		Andrade, Aron, et al., "Characteristics of a Blood Pump Combining the Centrifugal and Axial Pumping Principles: The Spiral Pump", Artificial Organs, vol. 20, No. 6, pp. 605-612, 1996.
		Burgreen, Greg W., et al., "A Design Improvement Strategy for Axial Blood Pumps Using Computational Fluid Dynamics", ASAIO Journal; 42:M354-M360, 1996.

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	4,705,501	Nov 87	Wigness et al.			
<u> </u>	4,753,221	Jun 88	Kensey et al.			
	4,769,031	Sep 88	McGough et al.			
	4,779,614	Oct 88	Moise			
	4,817,586	Apr 89	Wampler			
	4,844,707	Jul 89	Kletschka	В		(VIII)
	4,846,152	Jul 89	Wampler et al.	İ		
	4,895,557	Jan 90	Moise et al.	J	AN 31	2003
	4,898,518	Feb 90	Hubbard et al.	TECHN	OLOGY C	18165 100 00
	4,906,229	Mar 90	Wampler			•
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 0397720	Mar 95	EPO			
0659443	Jun 95	EPO			
0591208	Nov 95	EPO			
 0699447	Mar 96	EPO			
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	 Kawahito, K., et al., "Ex Vivo Evaluation of the NASA/DeBakey Axial Flow Ventricular Assist Device", ASAIO Journal; 42:M754-M757, 1996.
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8	4,919,647	Apr 90	Nash			
	4,925,377	May 90	Inacio et al.			
	4,927,407	May 90	Dorman		<u> </u>	
	4,944,722	Jul 90	Carriker et al.		DEC	EIVED
	4,950,259	Aug 90	Geary et al.			
	4,955,861	Sep 90	Energren et al.		JAN	3 1 2003
	4,957,504	Sep 90	Chardack	Т	CHNOLO	GY CENTER R3700
	4,969,865	Nov 90	Hwang et al.			
	4,984,972	Jan 91	Clausen et al.			
	4,985,014	Jan 91	Orejola			
	4,994,017	Feb 91	Yozu			

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1	~ ;	0 768 091	Apr 97	EPO			
\perp		2233 293	Jan 73	Germany			
1		24 53 296	May 76	Germany			
ot		286 145	Jan 71	Russian Federation			
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		McCarthy, Patrick M., et al., 'Permanent Mechanical Circulatory Support With an Implantable Left Ventricular Assist Device', Annals of Thoracic Surgery; 63:1458-61, 1997.
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1	4,994,078	Feb 91	Jarvik						
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	5,009,636	Apr 91	Wortley et al.						
	5,011,380	Apr 91	Kovacs						
	5,019,102	May 91	Hoene						
	5,044,369	Sep 91	Sahota						
	5,044,897	Sep 91	Dorman						
	5,049,134	Sep 91	Golding et al.						
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	5,061,256	Oct 91	Wampler						

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	WO 85/01432	Apr 85	WIPO			
	WO 85/01436	Apr 95	WIPO			
	WO 88/07842	Oct 88	WIPO			
	WO 89/04644	Jun 89	WIPO			
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<u> </u>		Nakazawa, Tadashi, et al., 'The Development of Pivot Bearing Supported Sealless Centrifugal Pump for Ventriucular Assist', Artificail Organs, vol. 20, No. 6, pp. 485-490, 1996
•		Nakazawa, Tadashi, et al., 'The Effect of the Impeller-Drive Magnetic Coupling Distance on Homolysis in a Compact Centrifugal Pump', Artificial Organs, vol. 20, No. 3, pp. 252-257, 1996.
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	5,079,467	Jan 92	Dorman			
	5,092,844	Mar 92	Schwartz et al.			
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	5,098,256	Mar 92	Smith		REC	EIVED
	5,112,200	May 92	Isaacson et al.		1	1 2003
	5,112,202	May 92	Oshima et al.	TEO		
	5,112,292	May 92	Hwang et al.	150	HINOLOGY	CENTER R3700
	5,118,264	Jun 92	Smith			
	5,145,333	Sep 92	Smith			
	5,147,187	Sep 92	Ito et al.			

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WO 89/05668	Jun 89	WIPO			
WO 89/07427	Aug 89	WIPO			
WO 90/15640	Dec 90	WIPO		;	
WO 91/01584	Feb 91	WIPO			
WO 92/02263	Feb 92	WIPO			

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0	5,147,388	Sep 92	Yamazaki			
	5,167,223	Dec 92	Koros et al.			
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	5,174,726	Dec 92	Findlay			
	5,195,877	Mar 93	Kletschka		HEC	CIVED
	5,205,721	Apr 93	Isaacson		JAN 3	1 2003
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	5,234,456	Aug 93	Silverstrini			
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	5,282,849	Feb 94	Kolff et al.			
1	5,290,227	Mar 94	Pasque			

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WO 93/07388	Apr 93	WIPO			
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	5,324,177	Jun 94	Golding et al.			
	5,326,344	Jul 94	Bramm et al.			
	5,344,443	Sep 94	Palma et al.			
	5,360,317	Nov 94	Clausen et al.			
	5,368,438	Nov 94	Raible	H	HECE	IVED
	5,370,509	Dec 94	Golding et al.	J	CANB 31	200003
	5,370,610	Dec 94	Reynolds	TEOH!	HOPAGY C	ENTER R3700
	5,376,114	Dec 94	Jarvik	IEGPRY	000000	ENACH HO/UU
	5,380,276	Jan 95	Miller et al.			
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 	WO 94/09835	May 94	WIPO			
 \perp	WO 94/13955	Jun 94	WIPO			
$\perp \downarrow$	WO 95/00185	Jan 95	WIPO			
	WO 95/28185	Oct 95	WIPO			

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	5,443,503	Aug 95	Yamane			EIVED
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	5,470,208	Nov 95	Ketschka		JAN 3	1 2003
	5,478,309	Dec 95	Sweezer et al.	TEC	HNOLOGY	CENTER R3700
	5,480,380	Jan 96	Martin			
	5,503,615	Apr 96	Goldstein			
	5,507,629	Apr 96	Jarvik			

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		WO 96/18358	Jun 96	WIPO			
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	5,531,789	Jul 96	Yamazaki et al.			
	5,558,634	Sep 96	Mitchell			
	5,575,630	Nov 96	Nakazawa et al.			
	5,588,812	Dec 96	Taylor et al.			
	5,613,935	Mar 97	Jarvik		RE	CEIVED
	5,647,358	Jul 97	Vilasi		JAN	
	5,695,471	Dec 97	Wampler			
	5,707,218	Jan 98	Maher et al.		ECHNOL	GY CENTER R3700
	5,727,569	Mar 98	Benetti et al.			
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(0)	5,782,797	Jul 98	Schwich, Jr. et al.			
	5,800,375	Sep 98	Sweezer et al.			
(8)	5,810,757	Sep 98	Sweezer, Jr. et al.			
48	5,976,103	Nov 99	Martin			
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*	4,955,856	Sep 90	Phillips			
	5,100,383	Mar 92	Lichtenstein			
	5,112,349	May 92	Summers et al.			
	5,718,678	Feb 98	Fleming III			
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